

AN ASSESSMENT OF WORK STRESS LEVEL AT ASIAN COMPOSITE  
MANUFACTURING (ACM) SDN. BHD.

A thesis submitted to the Graduate School in partial fulfillment of the requirements for  
the degree Master of Science (Management),  
Universiti Utara Malaysia

By

Naemah Binti Othman

The contents of  
the thesis is for  
internal user  
only

### **PERMISSION TO USE**

In presenting this thesis in partial fulfillment of the requirements for a post graduate degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for coping of this thesis in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor (s) or, in their absence, by the Dean of the Graduate School. It is understood that any coping or publication or use of this thesis or parts there of for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part should be addressed to:

Dean of Graduate School  
Universiti Utara Malaysia  
06010 UUM Sintok  
Kedah Darul Aman



Fakulti Pengurusan Perniagaan  
(Faculty of Business Management)  
Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PROJEK  
(Certification of Project Paper)

Saya, yang bertandatangan, memperakukan bahawa  
(I, the undersigned, certify that)

NAEMAH OTHMAN

calon untuk Ijazah  
(candidate for the degree of)

MASTER OF SCIENCE (MANAGEMENT)

telah mengemukakan kertas projek yang bertajuk  
(has presented his/her project paper of the following title)

AN ASSESSMENT OF WORK STRESS LEVEL AT ASIAN COMPOSITE

MANUFACTURING (ACM) SDN. BHD.

Seperti yang tercatat di muka surat tajuk dan kulit kertas projek  
(as it appears on the title page and front cover of project paper)

bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.  
(that the project paper acceptable in form and content and that a satisfactory knowledge of the field is covered by the project paper).

Nama Penyelia  
(Name of Supervisor)

: DR. AMER HJ. DARUS

Tandatangan  
(Signature)

:

Tarikh  
(Date)

:

18/6/07

## ABSTRAK

Kajian kes di Asian Composite Manufacturing (ACM) Sdn. Bhd. Bukit Kayu Hitam, Sintok, Kedah ini dijalankan untuk membuat penilaian terhadap tahap tekanan dikalangan pekerja sokongan mengikut jantina dan skop pekerjaan. Instrumentasi yang digunakan adalah berdasar Occupational Stress Inventory-Revised (OSI-R) dari kajian Osipow (1998). Seramai 175 orang pekerja sokongan yang menjawab soal selidik dan SPSS versi 13.0 digunakan bagi tujuan penganalisaan data. Tiga skala utama adalah peranan pekerjaan (Occupational Role Questionnaires-ORQ), tekanan personal (Personal Strain Questionnaires-PSQ), sumber personal (Personal Resources Questionnaires). Skala pertama (Occupational Role-OR) dibahagikan kepada 6 sub-skala iaitu bebanan kerja (Role Overload-RO), ketidakcukupan kerja (Role Insufficiency-RI), kesamaran peranan (Role Ambiguity-RA), konflik peranan (Role Boundary-RB), tanggungjawab (Responsibility-R), dan persekitaran fizikal (Physical Environment-PE). Skala kedua (Personal Strain-PS) dibahagikan kepada 4 sub-skala iaitu tekanan vokasional (Vocational Strain-VS), tekanan psikologi (Psychological Strain-PSY), tekanan interpersonal (Interpersonal Strain-IS), dan tekanan fizikal (Physical Strain-PHS). Skala ke tiga dibahagikan kepada 4 sub-skala iaitu rekreasi (Recreation-RE), penjagaan diri (Self-Care-SC), sokongan social (Social Support-SS) dan pendekatan kognitif (Rational/Cognitive Coping-RC). Dapatan kajian mendapati aras bebanan kerja keseluruhan bagi lelaki dan wanita di ACM menunjukkan normal (normal and mild stress), kecuali lelaki dalam sub-skala kesamaran peranan (Role Ambiguity-RA) menunjukkan aras tekanan yang tinggi (strong stress) berbanding dengan wanita.

## **ABSTRACT**

The purpose of this study is to assess the level of stress among supporting staff based on gender and duties of occupational at Asian Composite Manufacturing Sdn. Bhd. at Bukit Kayu Hitam, Sintok, Kedah. The instrument used for measuring or to assess the level of stress was adopted from Osipow (1998), based on Occupational Stress Inventory-Revised (OSI-R). 175 respondents have completed the questionnaires. Three main scales that been used in this study are, Occupational Role, Personal Strain and Personal Resources. First scale is Occupational Role-consists 6 sub-scales, Role Overload (RO), Role Insufficiency (RI), Role Ambiguity (RA), Role Boundary (RB), Responsibility (R) and Physical Environment (PE). A second scale Personal Strain- includes 4 sub-scales, Vocational Strain (VS), Psychological Strain (PSY), Interpersonal Strain (IS), and Physical Strain (PHS). Meanwhile, third scale is Personal Resources- includes 4 sub-scales, Recreation (R), Self-Care (SC), Social Support (SS) and Rational/Cognitive Coping. From the analysis, the level of work stress at ACM showed the workers have a normal stress level, except for male under the sub-scale category ( Role Ambiguity – RA) which showed strong stress level compared to the female workers.

## **ACKNOWLEDGEMENTS**

First of all, I would like to thank ALLAH for giving me strength and opportunity to complete this research. I wish to express my sincere gratitude to my family. In particular, I would like to express my appreciation to Dr Amer Hj Darus for his inspiration, encouragement, wisdom and understanding in getting this research complete. A special thanks Mr Ku Sofi as Assistant Human Resource Manager who gave information and allowed me to do research at Asian Composite Manufacturing Sdn. Bhd. Also a special thanks for Noorasyikin Binti Hj Mohd Noh who saw me through to the end and provided extremely valuable insight and direction at crucial points along the road. Thanks to my friends for their encouragement and assistance to make this research possible. I have reached this place not by my effort alone but also through your support and love. Also not forgotten to all the respondents for answering the questionnaires. Finally a special thank to my good friend Nasd Rohaida Binti Abdul Rahim, Fazlin Rehaihi Mohd Nordin, Nur Muizz Bin Mohamed Salleh and Hadi Bin Hanifah. I am very grateful of what all of you have done for me.

Once again **THANK YOU VERY MUCH**

**DEDICATION**

**I take a great deal of pride in dedicating this thesis;**

**To My Parents**

**“Othman Mohammed”**

**“Zaharah Sulaiman”**

**And To My Brothers and Sisters**

**“Azizah Othman”**

**“Maziah Othman”**

**‘Muhd. Nur Othman’**

**“Solehah Othman’**

**“Muhd. Kamil Othman”**

**“Muhd. Faiz Zakwan Othman”**



<b>TABLE OF CONTENTS</b>	
	<b>Page</b>
<b>PERMISSION TO USE</b>	i
<b>ABSTRACT (BAHASA MELAYU)</b>	ii
<b>ABSTRACT (ENGLISH)</b>	iii
<b>ACKNOWLEDGEMENTS</b>	iv
<b>DEDICATION</b>	v
<b>TABLE OF CONTENTS</b>	vi – xi
<b>LIST OF FIGURES</b>	xii
<b>LIST OF TABLES</b>	xii - xv
<b>CHAPTER ONE: INTRODUCTION</b>	
1.1 Background of the Study	1
1.2 Problem Statement	2
1.3 Objective of the Study	2
1.4 Significant of the Study	2 - 3
1.5 Definitions of Terms	3 – 7
1.6 Scope of the Study	7
1.7 Limitation of the Study	7 – 8

1.8	Organizations of the Study	8 - 9
<b>CHAPTER TWO: LITERATURE REVIEW</b>		
2.1	Introduction	10
2.2	Stress and the Factors of Stress	11 – 13
2.3	Work Stress	14 – 15
2.4	Research Support	15 – 16
2.5	Occupational Stress Inventory Revised (OSI-R)	16 – 17
2.6	Occupational Role Factors	17
2.6.1	Role Overload (RO)	18
2.6.2	Role Insufficiency (RI)	18
2.6.3	Role Ambiguity (RA)	19
2.6.4	Role Boundary (RB)	20
2.6.5	Responsibilities (R)	20
2.6.6	Physical Environment (PE)	21
2.7	Occupational Strain Factors	21
2.7.1	Vocational Strain (VS)	22
2.7.2	Psychological Strain (PSY)	22
2.7.3	Interpersonal Strain (IS)	23
2.7.4	Physical Strain (PHS)	23
2.8	Occupational Coping Factors	23

2.8.1 Recreation (RE)	24
2.8.2 Self-Care (SC)	24
2.8.3 Social Support (SS)	25 - 26
2.8.4 Rational / Cognitive Coping (RC)	26
2.9 Summary	27
<b>CHAPTER THREE: RESEARCH METHODOLOGY</b>	
3.1 Introduction	28
3.2 Research Location	28
3.3 Research Design	28
3.4 Research Subjects	28
3.5 Research Instrumentation	28 – 32
3.6 Scoring of the Instruments	32
3.7 Profiling of the Respondents	32
3.8 Interpretation of the Profiling	33 – 36
3.9 Data Collection Procedures	37
3.10 Data Analysis	37

<b>CHAPTER FOUR: RESULTS</b>	
4.1 Introduction	38
4.1.2 The Total and Percentage of Distributed, Unreturned and Return / Useable Questionnaires	38
4.2 The Respondents' Profile	39
4.2.1 Gender	39
4.2.2 Age	40
4.2.3 Monthly Income	40
4.2.4 Academic Qualification	41
4.2.5 Marital Status	42
4.2.6 Scope of Duties	42 – 43
4.3 Reliability of Instrumentations	44 – 45
4.4 Achieving the Research Objectives	46
4.5 Occupational Role Questionnaires (ORQ)	46
4.5.1 Role Overload (RO)	46 – 49
4.5.2 Role Insufficiency (RI)	50 – 52
4.5.3 Role Ambiguity (RA)	53 – 56
4.5.4 Role Boundary (RB)	57 – 59
4.5.5 Responsibilities (R)	60 – 62

4.5.6 Physical Environment (PE)	63 – 65
4.6 Personal Strain Questionnaires (PSQ)	66
4.6.1 Vocational Strain (VS)	66 – 69
4.6.2 Psychological Strain (PSY)	70 – 72
4.6.3 Interpersonal Strain (IS)	73 – 76
4.6.4 Physical Strain (PHS)	76 – 78
4.7 Personal Resource Questionnaires (PRQ)	79
4.7.1 Recreation (RE)	79 – 81
4.7.2 Self-Care (SC)	82 – 84
4.7.3 Social Support (SS)	85 – 87
4.7.4 Rational / Cognitive Coping (RC)	88 – 90
4.8 Summary of the Stress Level	91 – 92
<b>CHAPTER FIVE: DISCUSSION AND CONCLUSION</b>	
5.1 Introduction	93
5.2 Discussion	93 – 94
5.3 The Assessment of Occupational roles Factors	94
5.3.1 Role Overload (RO)	94
5.3.2 Role Insufficiency (RI)	95

5.3.3	Role Ambiguity (RA)	95 – 96
5.3.4	Role Boundary (RB)	96
5.3.5	Responsibility (R)	96
5.3.6	Physical Environment (PE)	96 – 97
5.4	The Assessment of Occupational Strain Factors	97
5.4.1	Vocational Strain (VS)	97
5.4.2	Psychological Strain (PSY)	97 – 98
5.4.3	Interpersonal Strain (IS)	98
5.4.4	Physical Strain (PHS)	98
5.5	The Assessment of Occupational Coping Factors	99
5.5.1	Recreation (RE)	99
5.5.2	Self-Care (SC)	99
5.5.3	Social Support (SS)	100
5.5.4	Rational / Cognitive Coping (RC)	100
5.6	Suggestion for the Future Research	100
5.7	Conclusion	101
<b>REFERENCES</b>		
<b>APPENDIXES</b>		
Appendixes 1 – Questionnaire		
Appendixes 2 – Cover Letter		

<b>LIST OF FIGURES AND TABLES</b>		
<b>LIST OF FIGURES</b>		<b>Page</b>
Figure 3.1	Schedule <i>T</i> Score for Males	35
Figure 3.2	Schedule <i>T</i> Score for Females	36
<b>LIST OF TABLES</b>		<b>Page</b>
Table 3.1	Scale Description and Possible High Score Interpretation of the occupational Stress Inventory (OSI-R)	30-32
Table 3.2	Interpretive <i>T</i> Score for ORQ and PSQ scale	33
Table 3.3	Interpretive <i>T</i> Score PQR scale	34
Table 4.1	The Total and Percentage of Distributed, Unreturned and Return/ Usable Questionnaires	39
Table 4.2	Profile of Respondents according to Gender	39
Table 4.3	Profile of Respondents according to Age	40
Table 4.4	Profile of Respondents according to Monthly Income	41
Table 4.5	Profile of Respondents according to Academic Qualification	41
Table 4.6	Profile of Respondents according to Marital Status	42

Table 4.7	Profile of Respondents according to Scope of Duties	43
Table 4.8	Reliability of Variables	44
Table 4.9	Reliability Occupational Role Questionnaires (ORQ), Personal Strain Questionnaires (PSQ), and Personal Resources Questionnaires (PRQ).	45
Table 4.10(a)	Role Overload (RO) for Females	47
Table 4.10(b)	Role Overload (RO) for Females	47
Table 4.10(c)	Role Overload (RO) Occupational-Female	48
Table 4.10(d)	Role Overload (RO) Occupational-Male	49
Table 4.11(a)	Role Insufficiency (RI) for Female	50
Table 4.11(b)	Role Insufficiency (RI) for Male	50
Table 4.11(c)	Role Insufficiency (RI) Occupational-Female	51
Table 4.11(d)	Role Insufficiency (RI) Occupational- Male	52
Table 4.12(a)	Role Ambiguity (RA) for Female	53
Table 4.12(b)	Role Ambiguity (RA) for Male	53
Table 4.12(c)	Role Ambiguity (RA) Occupational - Female	55
Table 4.12(d)	Role Ambiguity (RA) Occupational – Male	56
Table 4.13(a)	Role Boundary (RB) for Female	57
Table 4.13(b)	Role Boundary (RB) for Male	57
Table 4.13(c)	Role Boundary (RB) Occupational – Female	58
Table 4.13(d)	Role Boundary (RB) Occupational - Male	59
Table 4.14(a)	Responsibility (R) for Female	60



Table 4.14(b)	Responsibility (R) for Male	60
Table 4.14(c)	Responsibility (R) Occupational - Female	61
Table 4.14(d)	Responsibility (R) Occupational - Male	62
Table 4.15(a)	Physical Environment (PE) for Female	63
Table 4.15(b)	Physical Environment (PE) for Male	63
Table 4.15(c)	Physical Environment (PE) Occupational - Female	64
Table 4.15(d)	Physical Environment (PE) Occupational - Male	65
Table 4.16(a)	Vocational Strain (VS) for Female	66
Table 4.16(b)	Vocational Strain (VS) for Male	67
Table 4.16(c)	Vocational Strain (VS) Occupational-Female	68
Table 4.16(d)	Vocational Strain (VS) Occupational-Male	69
Table 4.17(a)	Psychological Strain (PSY) for Female	70
Table 4.17(b)	Psychological Strain (PSY) for Male	70
Table 4.17(c)	Psychological Strain (PSY) Occupational - Female	71
Table 4.17(d)	Psychological Strain (PSY) Occupational - Male	72
Table 4.18(a)	Interpersonal Strain (IS) for Female	73
Table 4.18(b)	Interpersonal Strain (IS) for Male	73
Table 4.18(c)	Interpersonal Strain (IS) Occupational – Female	74
Table 4.18(d)	Interpersonal Strain (IS) Occupational - Male	75
Table 4.19(a)	Physical Strain (PHS) for Female	76
Table 4.19(b)	Physical Strain (PHS) for Male	76
Table 4.19(c)	Physical Strain (PHS) Occupational - Female	77

Table 4.19(d)	Physical Strain (PHS) Occupational - Male	78
Table 4.20(a)	Recreation (RE) for Female	79
Table 4.20(b)	Recreation (RE) for Male	79
Table 4.20(c)	Recreation (RE) Occupational - Female	80
Table 4.20(d)	Recreation (RE) Occupational - Male	81
Table 4.21(a)	Self-Care (SC) for Female	82
Table 4.21(b)	Self-Care (SC) for Male	82
Table 4.21(c)	Self-Care (SC) Occupational – Female	83
Table 4.21(d)	Self-Care (SC) Occupational - Male	84
Table 4.22(a)	Social Support (SS) for Female	85
Table 4.22(b)	Social Support (SS) for Male	85
Table 4.22(c)	Social Support (SS) Occupational - Female	86
Table 4.22(d)	Social Support (SS) Occupational - Male	87
Table 4.23(a)	Rational/Cognitive Coping (RC) for Female	88
Table 4.23(b)	Rational/ Cognitive Coping (RC) for Male	88
Table 4.23(c)	Rational/ Cognitive Coping (RC) Occupational - Female	89
Table 4.23(d)	Rational/ Cognitive Coping (RC) Occupational – Male	90
Table 4.24	Summary of the stress level	91-92

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Asian Composite Manufacturing Sdn. Bhd. (henceforth, ACM Sdn. Bhd.) is a strategic alliance between Malaysian public-listed companies; Sime Darby Bhd and Naluri Bhd. They also have partners from the United States of America; The Boeing Company and Hexcel Corporation. The birth of ACM Sdn. Bhd. is the result of astute business decisions based on the following advantageous scenario:

- 1.1.1 Favorable regional economic growth forecast in Asia;
- 1.1.2 Lower operating costs;
- 1.1.3 Friendly and attractive of the Malaysian Government business policies;
- 1.1.4 Malaysia as a long term customer of the Boeing Company; and
- 1.1.5 Malaysia's unwavering vision and efforts to become a high-tech hub in Asia.

Since, ACM Sdn. Bhd. is in the process of growing to be a World Class Manufacturing Center, their employees should move faster than before. In these situations, employees will be stressed with plenty of work and should cope up with the new technologies, new machines, new customers and new culture at once. All these factors create stress situations among their employees, especially for the staffs.